

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of)	
)	
2016 Biennial Review of)	WT Docket No. 16-138
Telecommunications Regulations By)	
The Wireless Telecommunications Bureau)	

COMMENTS OF FAST DAS, LLC

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SUMMARY

Over the past several years, the Commission has promoted a policy of expediting wireless broadband development. In its October 2014 *Infrastructure Order*, the Commission took a major step toward furthering its policy by promulgating rules that facilitate the sharing of wireless communications infrastructure. One such rule is Section 1.40001, “Wireless Facility Modifications.”

Section 1.40001 requires state and local governments to approve “eligibility facilities requests” for modification of existing towers or base stations if the request does not substantially alter their physical dimensions. A key subsection of this rule is the 60-day timeframe for review eligible facilities requests; an eligible facilities request is “deemed granted” if a state or local government fails to issue a decision by the expiration of the 60-day “shot clock.”

While this rule can certainly serve to help expedite the sharing of infrastructure, there are some gaps therein that can result in substantial delays in the construction of wireless equipment. Under the current rule, a reviewing entity can indefinitely delay construction of a site simply by filing legal action against an applicant. There is no requirement reviewing entities conduct their proceedings in public. State and local governments are at liberty to conduct their reviews of eligibility facilities requests in closed proceedings. This can lead to all manner of regulatory uncertainty and delays in deploying wireless infrastructure.

Accordingly, Section 1.40001 should be modified to provide for immediate construction after the expiration of the shot clock, and mandate full transparency by state and local governments in their eligible facilities request proceedings. These suggested rule modifications will promote the Commission’s goal of rapid wireless broadband deployment, by removing needless delays in the construction and sharing of wireless infrastructure.

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I. INTRODUCTION

Fast DAS, LLC (“Fast DAS”), by its attorney, submits these comments in response to the Commission’s recent *Public Notice* seeking comments as part of its 2016 Biennial Review of Telecommunications Regulations.¹ The rule modifications that Fast DAS advocates herein will help expedite and consolidate the densification of the wireless technology equipment necessary to deliver the largest amount of bandwidth to the public, which will act as a catalyst in achieving the Commission’s critical public interest mission of spurring the rapid deployment of wireless broadband to consumers, businesses, and public safety entities throughout the U.S.²

a. Fast DAS’s Standing in this Proceeding

Fast DAS is a veteran-owned independent provider of distributed antenna systems (“DAS”), located in Oakton, VA.³ Fast DAS works with spectrum operator organizations to plan, implement, and monitor quality multi-carrier neutral host DAS for enterprise clients. Fast DAS specializes in efficiently bringing to market spectrum operator standards compliant power-

¹ See Commission Seeks Public Comment in 2016 Biennial Review of Telecommunications Regulations, *Public Notice*, FCC 16-149, rel. November 3, 2016.

² See *In the Matter of Broadband Deployment by Improving Wireless Facilities Siting Policies, Report and Order*, 29 FCC Rcd 12865 ¶ 5 (2014) (“*Infrastructure Order*”).

³ See www.fastdas.com.

sharing multicarrier neutral host wireless telecommunications infrastructure solutions that serve commercial enterprise clients and public safety entities. In concert with spectrum operators and enterprise clients, Fast DAS effectively delivers large amounts of high quality bandwidth by utilizing carrier standards to optimize and safeguard scarce spectrum resources.

Fast DAS also works closely with first responders to efficiently implement and commission public safety radio systems. In order to deliver those systems, Fast DAS works with local and state agencies on code compliance, zoning, siting, and other regulatory matters.

Through its work with those government agencies, as well as businesses and first responders, Fast DAS understands the importance of efficient wireless infrastructure siting regulations. And, as a DAS provider, Fast DAS's business is affected by the FCC's siting rules.

It is instructive to provide a brief overview as to how Fast DAS's systems work, in order to illustrate why Fast DAS requires reliable outside signals and how it provides complete building coverage, which is important for public safety reasons, as described below.

A Fast DAS in-building system receives an outside radio signal that is fed into a DAS head-end. The signal source may be: (a) a base transceiver station, or small cell, for cellular, public safety, or both, that is collocated at the DAS head-end; or (b) a bi-directional amplifier(BDA) fed by a directional rooftop donor antenna that picks up and rebroadcasts over the air signals from a nearby site, collocated and injected to the DAS head-end . The DAS head-end converts the radio frequency ("RF") signal to an optical signal for transmission over a fiber optic cable that connects to DAS remote unit. The remote units convert the optical signal back to an RF signal and connect to antennas that are strategically located throughout the building.

While Fast DAS's current business is primarily the provision of in-building DAS, its business plan includes expansion to outdoor venues, which will make the FCC's siting rules even

more pertinent to Fast DAS's core business. Accordingly, Fast DAS has standing in this proceeding.

II. THESE COMMENTS FALL WITHIN THE SCOPE OF A SECTION 11 REVIEW

Section 11 of the Telecommunications Act of 1996 ("1996 Act") requires the Commission to undertake biennial reviews of its rules in order to identify and repeal or modify any rules that are no longer in the public interest as a result of meaningful economic competition between providers of such service.⁴ In the *Public Notice*, the Commission stated that parties in this proceeding should discuss how their suggested rule changes satisfy the standards of Section 11 as interpreted by the D.C. Circuit Court in *Cellco Partnership v. FCC*, which affirmed the Commission's Section 11 interpretations in its *2002 Biennial Review*.⁵

In its *2002 Biennial Review*, the Commission stated that scope of a Section 11 review involves rules that: (a) apply to the operations or activities of any telecommunications provider; and (b) were promulgated under the Communications Act.⁶ The Commission's primary task in a biennial review involves identifying, and modifying or eliminating such rules that are no longer necessary.⁷ The Commission averred that adding rules, as opposed to modifying or eliminating existing them, *may* be beyond the immediate task of a Section 11 review.⁸ The Commission clarified that, as it had decided in a previous biennial review, it is not prohibited from expanding the scope of its Section 11 review to consider other matters, *i.e.*, when it reviews its rules pursuant to the biennial review requirements and considers competitive developments, the

⁴ See *Public Notice* at 1, citing 47 U.S.C. §161(b).

⁵ *Id.*, citing *Cellco Partnership v. FCC*, 357 F.3d 88 (D.C. Cir. 2004) and *2002 Biennial Regulatory Review, Opinion*, 18 FCC Rcd 4726 (2003).

⁶ *2002 Biennial Review* at ¶ 7.

⁷ *Id.* at ¶ 11.

⁸ *Id.*

Commission may consider whether new or different regulations are more appropriate than the current ones.⁹

To that end, Fast DAS urges the Commission to modify Section 1.40001 of its Rules,¹⁰ which pertains to telecommunications activities and was promulgated pursuant to the Communications Act.¹¹ Specifically, Fast DAS requests that Section 1.40001 be modified to include: (1) a provision stating that once an eligible facilities application is “deemed granted” due to local government inaction and expiration of the applicable “shot clock,” the applicant may immediately commence construction and provide service; and (2) language mandating that state and local governments’ eligible facilities application review proceedings must be done publicly, with full transparency. Fast DAS also advocates adopting and expanding Commissioner Pai’s suggestions that the federal government promote entrepreneurs’ access to capital.

III. COMPETITION IS ROBUST IN THE WIRELESS MARKETPLACE: NEUTRAL-HOST DAS FILLS IN COVERAGE GAPS AND INCREASES CAPACITY TO EXPEDITE WIRELESS BROADBAND TO THE PUBLIC

Regarding the “meaningful economic competition” aspect of a Section 11 review, as shown by the Commission’s most recent *Wireless Competition Report*,¹² competition among U.S. wireless providers is flourishing. As of July 2015, “approximately 92 percent of the population was covered by three or more service providers, while approximately 82 percent of the population was covered by four or more service providers.”¹³ The Commission stated that the

⁹ *Id.*, citing *The 2000 Biennial Regulatory Review, Opinion*, 16 FCC Rcd 1207 (2000) at ¶ 19.

¹⁰ 47 C.F.R. §1.40001.

¹¹ See e.g., *Infrastructure Order* at ¶ 149. Section 1.40001 implements Section 6409 of the Spectrum Act, which was codified at Section 1455 of the Communications Act, 47 U.S.C. §1455.

¹² *In the Matter of Implementation of Section 6002(b) of the Omnibus Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions With Respect to Mobile Wireless, Including Commercial Mobile Services, Eighteenth Report*, 30 FCC Rcd 14515 (2015).

¹³ *Id.* at ¶ 38.

implementation of wireless infrastructure facilities, including DAS, is one of the major indices of competition in the wireless industry.¹⁴ The Commission further asserted that in recent years, wireless providers have been employing more and more DAS facilities to fill local coverage gaps and increase local capacity.¹⁵ DAS facilities are deployed to address coverage and capacity issues outdoors in densely populated areas where wireless demands are too great to be met solely with macro cells.¹⁶

A primary reason why DAS is an indispensable part of wireless competition is its neutral host capabilities, which are designed for multiple carriers. A DAS node can support an unlimited number of simultaneous connections. That is because a DAS is simply a medium for RF transport and any limits on the supporting connections are imposed by the signal sources that feed the DAS. A neutral host DAS can support up to 16 frequency bands and thousands of devices, depending on the number of radio transceivers allocated to the network.¹⁷

Neutral host DAS infrastructure sharing is more economical for wireless carriers. If a DAS is designed and deployed properly, it will provide the largest amount of high quality licensed bandwidth through common coverage and capacity to numerous spectrum operators via a single distribution backbone that can be achieved without adding multiple layers of independent systems, i.e. small cells. Each “Carrier”, *i.e.* licensed spectrum operator organization, needs to provide only their signal sources (via a dedicated base station or a donor antenna/signal conditioner/BDA) to connect its core network to a neutral host DAS.

¹⁴ *Id.* at ¶ 63.

¹⁵ *Id.* at ¶ 64.

¹⁶ *Id.*

¹⁷ *Id.*

The respected Wireless 20/20 industry consultant Randall Schwartz recently explained how neutral host infrastructure sharing is critical to the economics of the wireless mobile broadband industry. Schwartz observed that mobile network carriers, businesses and venue owners are focusing their network infrastructure investments on providing the same level of in-building coverage and capacity that customers expect outdoors, and that neutral host networks are key to balancing the need for coverage and capacity with the reality of cost pressures:

As individual [mobile network operators] look to deploy their own solutions in a venue, the cost for providing this additional coverage may not justify the benefit for the improved service. Yet, if a third party can provide one shared infrastructure, such as DAS, small cells or cloud RAN that can support all operators in a venue, the economics suddenly turn in favor of both the Neutral Host provider and the MNOs.¹⁸

Because neutral host DAS is such an important component of meaningful economic wireless competition, the Commission should review its pertinent rules, and modify them to ensure that neutral host DAS and similar technologies can flourish in the U.S. marketplace.¹⁹

IV. INTERNATIONAL LAW REQUIRES IN-BUILDING RADIO COVERAGE FOR PUBLIC SAFETY PURPOSES

Blocked radio reception, particularly in buildings, remains a real problem for first responders, who depend on unobstructed communication to ensure the safety of themselves and others in emergency situations.²⁰ Because delayed action by local governments raise serious public safety concerns, in addition to hindering the deployment of commercial wireless broadband, it is important to consider what is at stake and why the subject rules should be modified.

¹⁸ See “Wireless 20/20 Consultant Call Neutral Host a ‘Win-Win for MNOs and Venue Owners,’” *RCR Wireless News* (July 26, 2016).

¹⁹ See *2000 Biennial Regulatory Review* at ¶19; see also *Infrastructure Order* at ¶ 5 (wireless broadband development would be expedited by facilitating the sharing of infrastructure, including neutral host DAS).

²⁰ See www.dassimplified.com/das.

The International Fire Code (“IFC”), which is in use in 42 states, the District of Columbia, Guam, and Puerto Rico, has a number of requirements regarding emergency responder radio coverage in buildings.²¹ These requirements include: (a) new buildings shall have approved radio coverage for emergency responders within the building; (b) radio signal strength requirements must be met in 95% of all areas on each floor of the building; and (c) all existing buildings shall have radio coverage throughout the building and are required to retrofit the building with radio coverage if the existing wired system is not able to be repaired or is being replaced; or per a timeline as identified by the pertinent jurisdiction.²²

In-building DAS is key to IFC compliance for building owners. With the current state of technology, Fast DAS utilizes separate equipment for the provision of public safety communications. Due to the disparity in the uplink transmit powers between public safety handsets (i.e. up to 3Watts) and commercial mobile user equipment (i.e. less than 200 milliwatts) Fast DAS does not recommend mixing the amplification of public safety and commercial uplink signals. Current neutral hosting does not provide adequate signal filtration and conditioning to sufficiently attenuate adjacent channel, spurious, and out of band emissions from causing harmful interference to commercial carrier operators who deal much lower powers.

In addition to IFC compliance, DAS is very useful in providing wireless coverage in health care facilities. Public health experts have explained that, because hospitals are some of the worst environments for RF coverage and interference (due to lead-lined rooms, tile walls, the

²¹ See International Code Adoptions ICC, <http://www.iccsafe.org/international-code-adoptions/>.

²² See International Fire Code, §510 (2012).

prevalence of fluids and metal, as well as RF medical devices) providing reliable in-building radio coverage is a very serious concern.²³

These experts have found that, for the reasons stated above concerning DAS' building coverage capabilities, DASs "are proving very effective at meeting the need for multi-carrier, multi-frequency coverage in the hospital environment."²⁴

A well-designed standards compliant neutral host DAS can serve multiple commercial wireless carriers in public health and safety institutions efficiently and economically. Many experts agree that DAS is an effective solution to meet the required in-building coverage standards and new building codes adopted in jurisdictions throughout the country.²⁵

As illustrated by these examples, modern public health and safety venues require rapid and reliable wireless coverage. The Commission's rules should be formulated to ensure that the communications needs of these entities are served.

V. RULE 1.40001 SHOULD BE MODIFIED TO FURTHER FACILITATE INFRASTRUCTURE SHARING THAT SUPPORTS WIRELESS BROADBAND

Section 1.40001 of the Commission's Rules was implemented for the purpose of removing barriers to wireless infrastructure deployment by, among other things, "facilitat[ing] the zoning processes for collocations and other modifications to existing towers and base stations."²⁶ Section 1.40001 helps facilitate infrastructure sharing by requiring state and local governments to expedite the processing of "eligible facilities requests" (*i.e.*, request for modification - including collocation of equipment - of an existing tower or base station that does

²³ See "Distributed Antenna Systems for Healthcare," *IT Horizons*, http://www.integrasystems.org/whitepapers/32-38_Behind%20the%20Technology_Hoglund.pdf.

²⁴ *Id.*

²⁵ See <http://blog.dasworldwide.com/meet-building-code-with-nfpa-mandates>.

²⁶ *Infrastructure Order* at ¶142.

not substantially change the physical dimensions of same).²⁷ Fast DAS supports the Commission's efforts in successfully undertaking the exacting and grueling Wireless Infrastructure rulemaking proceeding that resulted in the implementation of Section 1.40001.

While Section 1.40001 has certainly helped in the proliferation of wireless broadband, some problems remain concerning various types of wireless infrastructure sharing. These issues, discussed below, have unnecessarily hindered wireless competition. Fast DAS's suggested rule modifications, which have also been proposed by Commissioner Pai,²⁸ would go a long way toward fixing the current infrastructure sharing obstructions.

a. The FCC Should Modify Subsection 1.40001(c)(4) to Provide that Construction May Begin Immediately After the Shot Clock Expires

Subsection 1.40001(c)(4) states that if a state or local government does not act on an eligible facilities request within 60 days of submission, it will (unless the review time is tolled for a legitimate reason) be "deemed granted" (*i.e.*, the 60-day "shot clock").²⁹ Section 1.40001(c)(5) provides that an applicant and reviewing authority may bring claims related to this rule to any court of competent jurisdiction.³⁰

The combination of the above-referenced subsections means that a state or local government can delay an eligible facilities applicant's construction of its equipment after the shot clock has expired by simply filing suit in court for any reason. This regulatory scenario has already resulted in substantial delays in wireless broadband implementation in many areas in the U.S.

²⁷ See 47 C.F.R. §§1.4001(a)-(c).

²⁸ See *Remarks of FCC Commissioner Ajit Pai at the CTIA Wireless Foundation Smart Cities Expo* (Nov. 2, 2016) ("*Remarks of Commissioner Pai*") at 2, http://transition.fcc.gov/Daily_Releases/Daily_Business/2016/db1102/DOC-342032A1.pdf.

²⁹ See 47 C.F.R. § 1.40001(c)(4).

³⁰ See 47 C.F.R. §1.40001(c)(5).

The ongoing saga of Sprint Wireless (“Sprint”) and Mobilitie LLC (“Mobilitie”) is a case in point. As is well known in the wireless industry, Sprint hired Mobilitie to construct a small cell (“mini-macro tower”) network around the country. These companies’ efforts have been stymied for various reasons, not the least of which is the fact that, although numerous eligible facilities requests have been granted, local government actions have delayed construction of the small cell network.³¹ As of September 2016, more than 1,000 construction permits have been issued to Mobilitie, but only about 100 small cell sites have been built.³² Among the difficulties that Sprint and Mobilitie are experiencing is that “municipalities have to decide whether to legally oppose Mobilitie and/or Sprint or acquiesce [to letting them construct the small cells].”³³

Fast DAS suggests that, in order to avoid substantial delays in the implementation of wireless broadband as illustrated by the Sprint-Mobilitie situation, the Commission should modify Subsection 1.40001(c)(4) to state that, notwithstanding the remedies provision, as soon as an eligible facility has been deemed granted, the applicant may commence building and providing service.

The importance of expediting wireless infrastructure sharing cannot be overstated. As discussed above, the sharing of utilities by collocating wireless infrastructure enables multiple carriers to densify their coverage economically, while reducing the need for multiple layers of small cell infrastructure, thus increasing bandwidth, improving performance, and expediting the time to market for wireless broadband. Modifying Subsection 1.40001(c)(1) as suggested will help prevent unnecessary wireless broadband implementation.

³¹ See “Sprint’s Small Cell Delays May be Worse than the Industry Thinks,” *Wireless Estimator*, September 6, 2016 (“*Small Cell Delays*”) at 1-3.

³² *Id.*

³³ *Id.*

b. Section 1.40001 Should Provide for Complete Transparency in State and Local Governments' Eligible Facilities Application Review Proceedings

In his remarks before the Smart Cities Expo, Commissioner Pai correctly explained that “where local governments are not transparent about their application processes, the FCC should should require some sunlight. These processes need to be public and streamlined.”³⁴

The need for the Commission to codify transparency in local government siting application proceedings is well illustrated by Sprint-Mobility small cell build-out delays. As a respected trade journal has reported, public information concerning eligible facilities request proceedings is very hard to come by. The journal requested permitting information from eight large municipalities as to the status of Mobilitie’s permitting proceedings; the information provided by the municipalities was spotty at best.³⁵

This lack of local government transparency has led many in the industry to guess and speculate as why Mobilitie’s build-out has experienced severe delays.³⁶ This kind of regulatory uncertainty can, in addition to delaying equipment build-out, cause mobile service providers to question whether and where they should expend their resources.

Insertion of a municipality standards adoption and application review transparency provision in Section 1.40001 would go a long way toward creating a sense of certainty among wireless providers. Moreover, it would speed up the permitting process, as public awareness of the applications process would encourage the municipalities to ensure that eligible facilities

³⁴ *Remarks of Commissioner Pai* at 2.

³⁵ *See Small Cell Delays* at 2.

³⁶ *Id.* at 3.

requests are decided by unbiased officials and that resources are properly expended toward reviewing and granting permits in the public interest.³⁷

VI. THE FEDERAL GOVERNMENT SHOULD PROMOTE ENTREPRENEURS' ACCESS TO CAPITAL

This section does not directly concern rule modification, but as it pertains to wireless broadband implementation vis-à-vis Commissioner Pai's Digital Empowerment Agenda, Fast DAS will briefly express its concurrence that the federal government should seek to promote entrepreneurs' access to capital.

Commissioner Pai acknowledged that wireless broadband startups often face daunting barriers to entry and financial obstacles in getting their businesses up and running, and that "a kickstarter for all entrepreneurs" is needed.³⁸ Commissioner Pai mentioned some very constructive investment possibilities such as incubators, crowdfunding and related proposals, including a research and development tax credit and long-term capital gains exemptions.³⁹

Fast DAS supports these forward-thinking suggestions. Fast DAS also submits that the Commission should consider additional financial incentives and incubation methods to foster further growth and entrepreneurial investment in this sector. Telecom infrastructure requires managed services because, the infrastructure requires utilities (power and backhaul), frequent configurations modifications and coordination among competing stakeholders, as well as day to day monitoring, maintenance, and administration.

³⁷ While it is beyond the scope of these comments, procedural due process is at issue when local governments hold secret hearings. It is entirely possible that, if examined closely, at least some of closed governmental proceedings could be considered unlawful.

³⁸ See Remarks of FCC Commissioner Pai, "A Digital Empowerment Agenda," Cincinnati, OH (Sept. 13, 2016).

³⁹ *Id.*

As discussed herein, DAS and related neutral host technologies are critical components of wireless broadband proliferation and public health and safety radio communications. Hence, the federal government should consider partnering with private sector companies already set up to scale the RF engineering organization necessary to effectively and efficiently help bring and manage this shared infrastructure to market, and to also to help fund and administer these critical neutral host systems where infrastructure ownership partnership is possible

Fast DAS also concurs with Commissioner Pai's idea for a Broadband Deployment Advisory Committee.⁴⁰ Fast DAS also suggests that such a committee include an engineering organization capable to coordinate day to day business with carriers, implement configuration changes, monitor, maintain, and administer the infrastructure and utilities. This would be the most effective means of efficiently organizing competing interests in the wireless broadband industry in an orderly fashion.

VII. CONCLUSION

For all the foregoing reasons, and based on the Commission's stated policy of encouraging wireless broadband implementation, Fast DAS urges the Commission to modify Section 1.40001 consistent with Fast DAS's recommendations above, and to consider the financial and organizational proposals, which would also further the Commission's wireless broadband policy.

⁴⁰ See *Remarks of Commissioner Pai* at 2.

Respectfully submitted,

Fast DAS, LLC

A handwritten signature in black ink, appearing to read 'R. Quirk Jr.', written over a horizontal line.

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